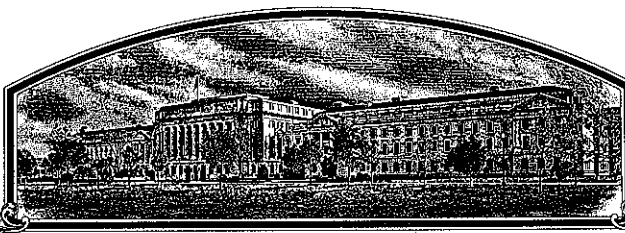


No.

9000026



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Plant Breeders 1 Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE
Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS SEEDS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS PROVIDED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

BARLEY

'Selway'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this 26th day of February in the year of our Lord one thousand nine hundred and ninety-three.

Attest:

Kenneth Howard
Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Ulysses S. Grant
Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions on reverse)

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) (as it is to appear on the Certificate) Plant Breeders 1 Inc.		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NO. PB1-82-2R-107	3. VARIETY NAME Selway
4. ADDRESS (street and no. or R.F.D. no., city, state, and ZIP) 851 East 7th Street Moscow, Idaho 83843		5. PHONE (include area code) (208)882-4483	FOR OFFICIAL USE ONLY PVPO NUMBER 9000026 Filing and Examination Fee: \$2,150.- Date Nov. 16, 1989 Certificate Fee: \$250.- Date Feb. 16, 1993
6. GENUS AND SPECIES NAME Hordeum vulgare	7. FAMILY NAME (Botanical) Gramineae		
8. CROP KIND NAME (Common Name) Barley	9. DATE OF DETERMINATION August 1, 1984		Filing and Examination Fee: \$2,150.- Date Nov. 16, 1989 Certificate Fee: \$250.- Date Feb. 16, 1993
10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.) Corporation			
11. IF INCORPORATED, GIVE STATE OF INCORPORATION Idaho		12. DATE OF INCORPORATION January 1, 1985	
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS Wayne L. McProud 851 East 7th Street Moscow, Idaho 83843 <div style="text-align: right;">(208)882-4483</div>			

PHONE (include area code):

14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow INSTRUCTIONS on reverse)

- a. ☒ Exhibit A, Origin and Breeding History of the Variety.
- b. ☒ Exhibit B, Novelty Statement.
- c. ☒ Exhibit C, Objective Description of Variety.
- d. ☒ Exhibit D, Additional Description of Variety.
- e. ☒ Exhibit E, Statement of the Basis of Applicant's Ownership.
- f. ☒ Seed Sample (2,500 viable untreated seeds). Date Seed Sample mailed to Plant Variety Protection Office **November 13, 1989**
- g. ☒ Filing and Examination Fee (\$2,150) made payable to "Treasurer of the United States."

15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See section 83(a) of the Plant Variety Protection Act.)
☒ YES (If "YES," answer items 16 and 17 below) ☐ NO (If "NO," skip to item 18 below)

16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
☒ YES ☐ NO

17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?
☒ FOUNDATION ☒ REGISTERED ☒ CERTIFIED

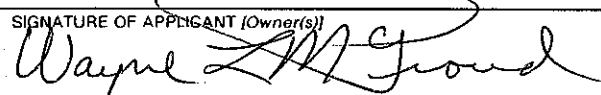
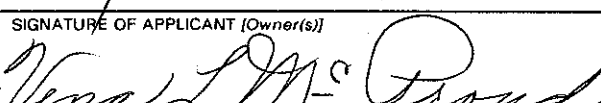
18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.?
☐ YES (If "YES," through ☐ Plant Variety Protection Act ☐ Patent Act. Give date: _____)
☒ NO

19. HAS THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETING IN THE U.S. OR OTHER COUNTRIES?
☐ YES (If "YES," give names of countries and dates)
☒ NO

20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in section 41, and is entitled to protection under the provisions of section 42 of the Plant Variety Protection Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT [Owner(s)] 	CAPACITY OR TITLE President Plant Breeders 1 Inc.	DATE 11/13/89
SIGNATURE OF APPLICANT [Owner(s)] 	CAPACITY OR TITLE Secretary Plant Breeders 1 Inc.	DATE 11/13/89

REVISED EXHIBIT A: Origin and breeding history of 'Selway'

'Selway', previously designated PB1-82-2R-107, resulted from the 1979 cross PB1-78-2R-23 X 'Seven'. The parents PB1-78-2R-23 and 'Seven' were both selections from a Plant Breeders 1 Inc. bulk population derived from intercrossing European and North American two rowed spring barleys.

In 1981 an F3 single plant selection was made from the above cross and entered into Plant Breeders 1's 1982 screening trial. As the line from this F3 plant selection segregated for susceptibility and resistance to powdery mildew, it was head hilled in 1984 to select for mildew resistance. From this head hilling five lines were selected that were resistant to mildew and showed the least amount of shattering in a late season hail storm. In yield and agronomic tests and in morphological measurements made from 1986 through 1988, these five (5) sublines were indistinguishable. The initial 1990 distribution of 'Selway' resulted from breeders seed comprised in equal measure of seed from each subline. For future seed increases all five sublines will be combined and only one unified bulk will be grown. 'Selway' has remained stable and uniform.

EXHIBIT B: Novelty statement

'Selway' is most similar to the two rowed spring barley 'Seven'. 'Selway' differs from 'Seven' in having yellow-green foliage color (146-A on Royal Horticultural Society Colour Charts) versus 'Sevens' green foliage color (137-B on the Royal Horticultural Society Colour Charts). At booting 'Selway's' flag leaf is drooping while 'Seven's' flag leaf is erect. 'Selway's' head exertion (distance from flag leaf to base of spike) averages 3 to 10 centimeters while 'Seven's' head exertion averages 0 to 3 centimeters. 'Selway's' neck is slightly snakey while 'Seven's' neck is mostly straight. 'Selway's' first leaf below flag leaf averages about 2.9 centimeters longer (TABLE 1) and about 2.5 millimeters wider (TABLE 2) than 'Seven's'.

TABLE 1: Comparing the two rowed spring barleys 'Selway' and 'Seven' for the length of first leaf below flag leaf (in centimeters).

Year/ Location	'Selway'					'Seven'				
1988/ Potlatch	23.4	27.3	25.6	23.6	19.2	28.0	22.6	21.8	25.4	22.6
	24.8	26.7	24.8	27.2	24.9	16.5	23.6	20.5	20.5	18.6
	24.1	24.4	24.8	27.3	24.8	21.9	23.4	23.5	22.3	22.5
	31.1	30.5	21.7	27.5	25.4	22.9	23.6	23.0	20.0	33.6
	27.2	23.9	28.4	26.7	24.8	20.3	18.6	19.5	23.4	20.3
	Average = 25.60					Average = 22.36				
1989/ Culdesac	27.8	30.9				26.5	26.4			
	34.6	27.0				26.2	26.3			
	26.7	31.3				25.5	24.6			
	25.5	23.2				26.5	23.4			
	31.7	23.0				26.5	25.0			
	Average = 28.17					Average = 25.69				
Two year average	26.88					24.02				

TABLE 2: Comparing the two rowed spring barleys 'Selway' and 'Seven' for the width of first leaf below flag leaf (in millimeters).

Year/ Location	'Selway'					'Seven'				
1988 Potlatch	17	15	15	18	12	13	13	12	13	12
	16	14	15	15	17	11	12	13	13	10
	14	16	16	17	16	12	12	13	12	11
	16	17	13	14	15	13	11	12	13	12
	13	14	14	15	13	11	12	10	12	12
Average = 15.1					Average = 12.0					
1989 Culdesac	17	18				16	14			
	17	15				14	15			
	15	18				14	14			
	14	14				15	14			
	17	15				13	13			
Average = 16.0					Average = 14.2					
Two year average	15.6					13.1				

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, POULTRY, GRAIN & SEED DIVISION
BELTSVILLE, MARYLAND 20705

EXHIBIT C
(Barley)

OBJECTIVE DESCRIPTION OF VARIETY
BARLEY (*HORDEUM VULGARE*)

INSTRUCTIONS: See Reverse.

NAME OF APPLICANT(S) Plant Breeders 1 Inc.	FOR OFFICIAL USE ONLY
ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) 851 East 7th Street Moscow, Idaho 83843	PVPO NUMBER 9000026
	VARIETY NAME OR TEMPORARY DESIGNATION SELWAY

Place the appropriate number that describes the varietal character of this variety in the boxes below.

Place a zero in first box (i.e. or) when number is either 99 or less or 9 or less.

1. GROWTH HABIT:

1 = SPRING 2 = FACULTATIVE WINTER 3 = WINTER Early Growth: 1 = PROSTRATE 2 = SEMIPROSTRATE
3 = ERECT

2. MATURITY (50% Flowering):

1 = EARLY (California Mariout) 2 = MIDSEASON (Betzes) 3 = LATE (Frontier)

No. of days Earlier than } 1 = BETZES 2 = CALIFORNIA MARIOUT 3 = CONQUEST 4 = DICKSON
 No. of days Later than } 5 = PIROLINE 6 = PRIMUS 7 = UNITAN

3. PLANT HEIGHT (From soil level to top of head):

1 = SEMIDWARF 2 = SHORT (California Mariout) 3 = MEDIUM TALL (Betzes) 4 = TALL (Conquest)

Cm. Shorter than } 1 = BETZES 2 = CALIFORNIA MARIOUT 3 = CONQUEST 4 = DICKSON
 Cm. Taller than } 5 = PIROLINE 6 = PRIMUS 7 = UNITAN

4. STEM:

Exertion (Flag to spike at maturity): 1 = 0 - 3 cm. 2 = 3 - 10 cm. Anthocyanin: 1 = ABSENT 2 = PRESENT
3 = 10 - 15 cm.

NO. OF NODES (Originating from node above ground)

Collar Shape: 1 = CLOSED 2 = V-SHAPED 3 = OPEN Shape of Neck: 1 = STRAIGHT 2 = SNAKY
4 = MODIFIED CLOSED OR OPEN 3 = OTHER (Specify) _____

5. LEAF:

Basal leaf sheath (seedling): 1 = GLABROUS 2 = PUBESCENT Position of flag leaf (at boot stage): 1 = DROOPING
2 = UPRIGHT

Waxiness: 1 = ABSENT (Glossy) 2 = SLIGHTLY WAXY MM. WIDTH (First leaf below flag leaf)
3 = WAXY

CM. LENGTH (First leaf below flag leaf) Anthocyanin in leaf sheath: 1 = ABSENT 2 = PRESENT

6. HEAD:

Type: 1 = TWO-ROWED 2 = SIX-ROWED Density: 1 = LAX 2 = ERECT (Not dense)
3 = ERECT (Dense)

Shape: 1 = TAPERING 2 = STRAP 3 = CLAVATE Waxiness: 1 = ABSENT (Glossy) 2 = SLIGHTLY WAXY
4 = OTHER (Specify) _____ 3 = WAXY

Lateral Kernels Overlap: 1 = NONE 2 = AT TIP Rachis (Hair on edge): 1 = LACKING 2 = FEW 3 = COVERED
3 = 1/4 - 1/2 OF HEAD

7. GLUME:

Length: 1 = 1/3 OF LEMMA 2 = 1/2 OF LEMMA Hairs: 1 = NONE 2 = SHORT 3 = LONG
3 = MORE THAN 1/2 OF LEMMA

Hair covering: 1 = NONE 2 = RESTRICTED TO MIDDLE 3 = CONFINED TO BAND 4 = COMPLETELY COVERED

Awns: 1 = LESS THAN EQUAL TO LENGTH OF GLUMES 2 = EQUAL TO LENGTH OF GLUMES
3 = MORE THAN EQUAL TO LENGTH OF GLUMES

Awn Surface: 1 = SMOOTH 2 = SEMISMOOTH 3 = ROUGH

8. LEMMA:

☐ 5 Awn: 1 = AWNLESS 2 = AWNLETS ON CENTRAL ROWS AWNLESS ON LATERAL ROWS
 3 = SHORT ON CENTRAL ROWS, AWNLETS ON LATERAL ROWS 4 = SHORT (less than equal to length of spike)
 5 = LONG (longer than spike) 6 = HOODED

☐ 3 Awn Surface: 0 = AWNLESS 1 = SMOOTH 2 = SEMISMOOTH 3 = ROUGH

☐ 1 Teeth: 1 = ABSENT 2 = FEW 3 = NUMEROUS

☐ 1 Hair: 1 = ABSENT 2 = PRESENT

☐ 2 Shape of base: 1 = DEPRESSION 2 = SLIGHT CREASE
 3 = TRANSVERSE CREASE

☐ 2 Rachilla Hairs: 1 = SHORT 2 = LONG

9. STIGMA:

☐ 2 Hairs: 1 = FEW 2 = MANY

10. SEED:

☐ 2 Type: 1 = NAKED 2 = COVERED

☐ 1 Hairs on Ventral Furrow: 1 = ABSENT 2 = PRESENT

☐ 4 Length: 1 = SHORT (8.0 mm.) 2 = SHORT TO MIDLONG (7.5 - 9.0 mm.) 3 = MIDLONG (8.5 - 9.5 mm.)
 4 = MIDLONG TO LONG (9.0 - 10.5 mm.) 5 = LONG (10.0 mm.)

☐ 3 Wrinkling of hull: 1 = NAKED 2 = SLIGHTLY WRINKLED 3 = SEMIWRINKLED 4 = WRINKLED

☐ 1 Aleurone Color: 1 = COLORLESS (White or Yellow) 2 = BLUE

☐ 0 0 PERCENT ABORTIVE

☐ 4 9 GMS. PER 1000 SEEDS

11. DISEASE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

<input type="checkbox"/> 0 SEPTORIA	<input type="checkbox"/> 0 NET BLOTCH	<input type="checkbox"/> 0 SPOT BLOTCH	<input type="checkbox"/> 2 POWDERY MILDEW
<input type="checkbox"/> 0 LOOSE SMUT	<input type="checkbox"/> 0 BACTERIAL BLIGHT	<input type="checkbox"/> 0 COVERED SMUT	<input type="checkbox"/> 0 FALSE LOOSE SMUT
<input type="checkbox"/> 0 STEM RUST	<input type="checkbox"/> 0 LEAF RUST	<input type="checkbox"/> 0 SCAB	<input type="checkbox"/> 0 SCALD
<input type="checkbox"/> 0 AY	<input type="checkbox"/> 0 BSMV	<input type="checkbox"/> 0 BYDV	<input type="checkbox"/> OTHER (Specify)

12. INSECT: (0 = Not tested, 1 = Susceptible, 2 = Resistant)

<input type="checkbox"/> 0 GREEN BUG	<input type="checkbox"/> 0 ENGLISH GRAIN APHID	<input type="checkbox"/> 0 CHINCH BUG	<input type="checkbox"/> 0 ARMYWORM
<input type="checkbox"/> 0 GRASS HOPPERS	<input type="checkbox"/> 0 CERIAL LEAF BETTLE	<input type="checkbox"/> OTHER (Specify)	
HESSIAN FLY RACES			
<input type="checkbox"/> 0 GP	<input type="checkbox"/> 0 A	<input type="checkbox"/> 0 B	<input type="checkbox"/> 0 C
<input type="checkbox"/> 0 D	<input type="checkbox"/> 0 E	<input type="checkbox"/> 0 F	<input type="checkbox"/> 0 G

13. CHEMICAL (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

☐ 0 DDT ☐ OTHER (Specify)

14. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant tillering	Seven	Seed size	Seven
Leaf size	Seven	Coleoptile elongation	Seven
Leaf color	Seven	Seedling pigmentation	Seven
Leaf carriage	Seven		Seven

REFERENCES: The following publications may be used as a reference aid for the standardization of character descriptions and terms used in this form:

1. Wiebe, G. A., and D. A. Reid, 1961, Classification of Barley Varieties Grown in the United States and Canada in 1958, Technical Bulletin No. 1224, U.S. Dept. of Agriculture.
2. Reid, D. A., and G. A. Wiebe, 1968, Barley: Origin, Botany, Culture, Winter Hardiness, Genetics, Utilization, Pests, Agriculture Handbook No. 338, U.S. Dept. of Agriculture. pp. 61 - 84.
3. Malting Barley Improvement Association, Milwaukee, Wisconsin, 1971, Barley Variety Dictionary.

COLOR: Nickerson's or any recognized color fan may be used to determine color of the described variety.

EXHIBIT D: Additional description of 'Selway'

'Selway' is a two rowed spring barley, *Hordeum vulgare*. When seeded at Culdesac, Idaho, on or about April 20, 'Selway's' first flowering averages June 24 or 65 days after seeding. This is four days later than Pirolina's first flowering date at Culdesac.

'Selway's' early growth is erect. Basal leaf sheaths are glabrous. At heading the flag leaf droops, tending to twist. Plant height averages 85.6 cm, that being about 2 cm taller than 'Pirolina'. 'Selway' has a very high tillering capacity and moderate to good lodging resistance. 'Selway's' northern Idaho yield is about 8% greater than 'Pirolina's'. 'Selway' matures slightly later than does 'Pirolina'.

'Selway' is a two rowed, nutans type with a long lax head. Lemma awns are rough, longer than head. Basal rachis internode is slightly long, tending to curve. 'Selway's' grain is of medium size, pale cream colored with slightly to semi wrinkled hulls. Aleurone is white, rachilla hairs long. Lemma base is slightly creased to depression, ventral furrows glabrous.

9000026

EXHIBIT E: Statement for the basis of applicant's ownership

Plant Breeders 1 Inc. is the breeder of the two rowed, feed type spring barley 'Selway'.